APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,707	01/11/2002	Dale E. Gulick	2000.052200/RSBTT4036	1281

23720 7590 04/22/2005	EXAMINER
WILLIAMS, MORGAN & AMERSON, P.C. 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042	TO, JENNIFER N

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/044,707	GULICK, DALE E.
	Examiner	**Art Unit**	
	Jennifer N. To	2195	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 January 2002_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-29_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-29_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _11 January 2002_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _10/07/2002_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-29 are presented for examination.

2.   The arrangement of the specification is objected to because the cross-reference
to related application is placing in an impropriated section of the specification (page 11-
14). The following guidelines illustrate the preferred layout for the specification of a
utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should
include the following sections in order. Each of the lettered items should appear in
upper case, without underlining or bold type, as a section heading. If no text follows the
section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR

DEVELOPMENT.

(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer

program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),

and tables having more than 50 pages of text are permitted to be
submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37

CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

"Sequence Listing" is required on paper if the application discloses a

nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

the required "Sequence Listing" is not submitted as an electronic

document on compact disc).

Claim Objections

3.   Claim 29 is objected to for not further limit the claim invention. Claim 29 is

identical to claim 25. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

6.   Claims 1-7 are directed to method steps in which can be practiced mentally in

conjunction with pen and paper, therefore they are directed to non-statutory subject

matter. Specifically, as claimed, it is uncertain what performs each of the claimed

method steps. Moreover, each of the claimed steps, inter alia, (storing, determining,

processing, calling) can be practiced mentally in conjunction with pen and paper that is

not tied to a technological art, environment, or machine which would result in a practical

application producing a concrete, useful, tangible result to form the basis of statutory

subject matter under 35 U.S.C. 101. Therefore, the claimed invention is directed to

non-statutory subject matter. The claims should be amended to indicate a computer

implements the subject matter.   (i.e. a computer implemented method).

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter in which the applicant regards as his invention.

8.   Claims 7 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim language in the following claims is not clearly understood:

    i.   as per claim 7, the word "substantially" renders the claim unclear.

    ii.   as per claim 21, it has the same deficiency as claim 7 above. Corrections are required.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1-3, 5-13, 15-17, 19-22, 24-25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick (U.S. Patent No. 6704763), in view of Hashimoto (U.S. Publication No. 2003/0061526 A1).

11.   As per claim 1, Gulick teaches the invention substantially as claimed including a method comprising:

each teak has an associate exit routine (col. 11, lines 4-6);

determining at least one task to process based on a priority scheme (col. 2, lines

41-44; col. 3, lines 6-8; col. 6, line 33);

processing the at least one task (col. 3, lines 46-47); and

calling the exit routine based on determining that task has not completed

processing within a pre-selected period of time (fig. 15; col. 8, lines 36-39; col. 11, lines

43-45; col. 11, lines 57-60).

Gulick did not specifically teach storing one or more tasks in the queue.

12.   However, Hashimoto teaches the step of storing one or more tasks in the queue

(fig. 1; paragraph 24, lines 8-9).

13.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick and Hashimoto because

Hashimoto indicating the step of storing one or more task in the queue would improve

the integrity of Gulick's system by queuing tasks that CPU can't handle at once

(Hashimoto, paragraph 24, line 4).

14.   As per claim 2, Hashimoto teaches storing the one or more task in the queue

comprises storing at least one task in the queue at every pre-selected time interval (fig.

1; paragraph 24, lines 6-9).

15.   As per claim 3, Hashimoto teaches storing the one or more tasks in the queue

comprises generating an interrupt (paragraph 24, lines 4-6) and storing the one or more

tasks in the queue in response to detecting the interrupt (paragraph 57, lines 4-11).

16.   As per claim 5, Gulick teaches calling the exit routine comprises calling the exit

routine if the task does not complete executing within a pre-selected amount of time

(col. 12, lines 35-47; col. 13, lines 20-24).

17.   As per claim 6, Gulick teaches calling the exit routine comprises terminating the

task currently processing and returning control to a task picker in the queue (fig. 7; col.

3, lines 1-4; col. 10, lines 44-48; col. 11, lines 4-6).

18.   As per claim 7, Gulick teaches processing the at least one task comprises

executing the task and programming a timer to generate an interrupt after a pre-

selected time (fig. 7, item 818; col. 12, line 48) wherein the pre-selected time

substantially corresponds to the amount of time required for the task to complete

executing (col. 12, lines 49-58).

19.   As per claim 8, Gulick teaches an apparatus comprising:

        determine if at least one task other than the task picker is stored in the queue

(col. 8, lines 1-2);

execute the task based on determining that at least one task other than the task

picker is stored in the queue (col. 8, lines 2-3; col. 8, lines 13-21); and

execute the task picker in response to executing the task and continue executing

the task picker until a pre-selected event occurs (fig. 3; col. 8, lines 21-24).

Gulick did not specifically teach:

a queue having a task picker stored therein; and

a controller communicatively coupled to the queue.

20.   Hashimoto teaches:

a queue having a task picker stored therein (fig. 1; paragraph 25, lines 3-7); and

a controller communicatively coupled to the queue (fig. 1, item 23).

21.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick and Hashimoto because

Hashimoto indicating the step of storing one or more task in the queue would improve

the integrity of Gulick's system by queuing tasks that CPU can't handle at once

(Hashimoto, paragraph 24, line 4).

22.   As per claim 9, Gulick teaches the pre-selected event comprises detection of an

interrupt (col. 8, lines 40-55).

23.   As per claim 10, Gulick teaches the pre-selected event comprises detection of
another task being present in the queue (col. 7, line 67; col. 8, lines 1-3).

24.   As per claim 11, Gulick teaches each task stored in the queue comprised an exit
routine to terminate that task (col. 11, lines 4-6).

25.   As per claim 12, Gulick teaches the controller comprises a controller of a south
bridge in a computer system (fig. 1, item 50).

26.   As per claim 13, Gulick teaches the controller determines that more than one
task is stored in the queue and wherein the controller selects a task to execute from the
one or more tasks based on a priority scheme (col. 6, lines 34-35; col. 8, line 13).

27.   As per claims 15-17, and 19-21, these are an article claims that correspond to
the method claims 1-3, and 5-7. Therefore, these claims are rejected for the same
reason as claims 1-3, and 5-7 above.

28.   As per claim 22, Gulick teaches the invention substantially as claim including an
apparatus comprising:

        a failure recovery timer to generate an interrupt at pre-selected time intervals (fig.
7, item 818; fig. 2, item 228), wherein each pre-selected time interval is greater than the

time it takes for each of the tasks stored in the queue to execute (col. 12, lines 49-58);

and

a controller adapted (fig. 1, item 23) to select a task to execute based on a

priority scheme (col. 6, lines 34-35; col. 8, lines 13-24);

execute the task (col. 8, lines 13-21);

determine if the task completes execution within the pre-selected time interval

(col. 8, lines 13-24);

terminate the task in response to determining that the task failed to complete

within the pre-selected time interval (col. 8, lines 36-39); and

execute the task picker in response to terminating the task (fig. 7; col. 3; line 48).

Gulick did not specifically teach a queue having a task picker stored therein, the

queue adapted to store one or more tasks.

29.   Hashimoto teaches a queue having a task picker stored therein (fig. 1; paragraph

25, lines 3-7), the queue adapted to store one or more tasks (paragraph 24, lines 1-9).

30.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick and Hashimoto because

Hashimoto indicating the step of storing one or more task in the queue would improve

the integrity of Gulick's system by queuing tasks that CPU can't handle at once

(Hashimoto, paragraph 24, line 4).

31.   As per claim 24, Gulick teaches each task has an associated exit routine (col. 11,

lines 4-6) and wherein the controller terminates the task by calling the exit routine (fig. 5,

item 618).

32.   As per claims 25, and 29, Gulick teaches the controller resets the failure recovery

timer before executing the task (col. 12, lines 48-58).

33.   As per claim 27, Hashimoto teaches a repetitive timer for generating interrupts on

a periodic basis wherein the controller posts a task in the queue in response to

detecting an interrupt generated by the repetitive timer (paragraph 27, lines 12-14).

34.   As per claim 28, Gulick teaches the controller resets the failure recovery timer

before executing the task picker (col. 12, lines 48-58).

35.   Claims 4, 14, 18, 23, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gulick (U.S. Patent No. 6704763), in view of Hashimoto (U.S.

Publication No. 2003/0061526 A1) as applied to claims 1, 8, 15 and 22 above, and

further in view of Kaneko (U.S. Patent No. 5349656).

36.   As per claim 4, Gulick and Hashimoto teach the invention substantially as

claimed in claims 1, 8, 15 and 22 above. Gulick and Hashimoto did not specifically

teach determining the at least one task based on a first in, first out priority scheme.

       However, Kaneko teaches determining the at least one task based on a first in,

first out priority scheme (col. 8, lines 1-12).

37.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick, Hashimoto, and Kaneko

because Kaneko step of determining the at least one task based on FIFO priority

scheme would improve the integrity of Gulick and Hashimoto's system by preventing

task from suspension within the queue (col. 8, lines 11-12).

38.   As per claim 14, Gulick and Hashimoto did not specifically teach the priority

scheme is a first-in, first-out scheme.

       However, Kaneko teaches the priority scheme is a first-in, first-out scheme (col.

8, line 10).

39.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick, Hashimoto, and Kaneko

because Kaneko step of determining the at least one task based on FIFO priority

scheme would improve the integrity of Gulick and Hashimoto's system by preventing

task from suspension within the queue (col. 8, lines 11-12).

40.   As per claim 18, it is an article claim that corresponds to the method claim 14.

Therefore, it is rejected for the same reason as claim 14 above.

41.   As per claim 23, Gulick and Hashimoto did not specifically teach the priority

scheme is a first-in, first-out scheme.

       However, Kaneko teaches the priority scheme is based on a first-in, first-out

scheme (col. 8, line 10).

42.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick, Hashimoto, and Kaneko

because Kaneko step of determining the at least one task based on FIFO priority

scheme would improve the integrity of Gulick and Hashimoto's system by preventing

task from suspension within the queue (col. 8, lines 11-12).

43.   As per claim 26, Gulick and Hashimoto teach the invention substantially as

claimed in claim 22. Gulick and Hashimoto did not specifically teach the controller

determines if the task completes execution within the pre-selected time interval

comprises:

detecting a first failure recovery interrupt;

causing an interrupt service routine to determine a task ID associated with a task executing at the time of the first failure recovery interrupt;

logging the determined task ID;

detecting a second failure recovery interrupt;

determining a task ID associated with as task executing at the time of the second failure recovery interrupt; and

terminating the task executing at the time of the second failure recovery interrupt in response to determining that the two task IDs are the same.

44.   Kaneko teaches the controller determines if the task completes execution within the pre-selected time interval comprises:

detecting a first failure recovery interrupt (col. 7, lines 25-36);

causing an interrupt service routine to determine a task ID associated with a task executing at the time of the first failure recovery interrupt (col. 7, lines 37-45);

logging the determined task ID (fig. 14, item 3102);

detecting a second failure recovery interrupt (col. 14, lines 4-22);

determining a task ID associated with as task executing at the time of the second failure recovery interrupt (col. 14, lines 26-38); and

terminating the task executing at the time of the second failure recovery interrupt in response to determining that the two task IDs are the same (col. 8, lines 65-67).

45.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Gulick, Hashimoto, and Kaneko

because Kaneko teaching of detecting a first and second failure recovery interrupt,

determining task ID associated with a task executing at the time of the first and second

failure recovery, and terminating the task if the two IDs are the same would improve the

efficiency of Gulick and Hashimoto's system by selecting an instruction processor which

can execute the task while maximizing the buffer storage unit (Kaneko, col. 3, lines 12-
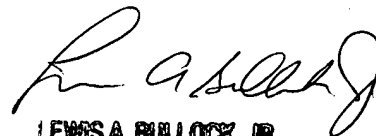
14).

Conclusion

46.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jennifer N. To whose telephone number is (571) 272-

7212. The examiner can normally be reached on M-T 7AM- 4:30 PM, F 7AM- 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer N To
Examiner
Art Unit 2195

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER